Summary of Comments and Questions Raised at AB 2076 Workshop on January 16, 2002 With California Energy Commission Staff Responses

Prepared for
CEC/ARB Staff Workshop
February 26, 2002

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Planning and Conservation League: Sandy Spellisy asked if the staffs were evaluating the impacts of the status quo. In a follow-up phone call, she expressed serious concerns with the use of a cost-benefit approach, and in particular, the CALCARS model. She asserted that the AB 2076 did not specifically require a cost-benefit methodology, and she fears that the results will not be useful or practical, due to over-reliance on a modeling approach. She specifically cited CEC Staff's analysis of the fee-bate proposal as an example of an overly theoretical approach to evaluating petroleum reduction strategies.

Staff Response: In general, the analysis is not evaluating the impacts of the status quo. Through our net cost/benefit evaluation of the impact of the strategies relative to the base case, we attempt to identify which strategies may potentially offer net benefits and the representative level of these benefits to provide a basis for developing recommended strategies and goals for reducing petroleum use. We are developing the cost/benefit analysis to assist the Commission and the Board in developing recommendations for strategies and goals.

Where it can be applied, the CALCARS model offers increased insights in cost/benefit analysis. The model allows the analysis to simulate the likely consumer choice and include the impacts on consumer surplus. For example, this approach allows the analysis to identify the value to consumers of increased choices, such as the value from additional new vehicle types and perhaps of greater vehicle range or performance.

The initial analysis the staff presented on fee-bate strategies indicates some important insights can be gained from a modeling analysis, as well as the need for a sufficiently comprehensive analysis. The initial analysis indicated that for a California fee-bate program that did not provide the consumers any new vehicle choices. Such a program would result in minor reduction in petroleum use and the cost impacts of the fees for consumers would likely increase the cost of transportation to consumers.

These results suggest a national fee-bate program could create significant improvements in fuel economy for new vehicles offered by the manufacturers to make a fee-bate program beneficial and more effective. A subsequent staff

analysis, using CALCARS, has identified the substantial benefits when the fee-bate program causes manufacturers to increase the fuel economy of their new vehicles offerings.

BP/ARCO: Dave Smith asked if we were considering supply availability in PADD V in determining the impact on California fuel demand. He also mentioned the trend toward fuel switching to natural gas for heating in the Pacific Northwest.

Staff Response: The analysis does not specifically consider supply availability in PADD V outside of California. The analysis does assume the suppliers of refinery products from outside the state will respond to market opportunities. Based on recent costs of imported fuels, the analysis assumes California's long-term need for imported refined products would be met with a cost differential of 15 cents per gallon.

Blue Water Network: Russell Long asked whether our fuel economy assumptions included hybrids.

Staff Response: Depending on the particular case, full hybrids and 42 volt mild hybrids are incorporated in fuel economy cases.

Coalition for Clean Air: Tim Carmichael asked if we were including reductions in Vehicle Miles Traveled, as a result of the Governor's statements that there will be no new freeways in California. He also commented that he would prefer a more aggressive fuel economy case.

Staff Response: The analysis does include limited impacts of future increased congestion in California. The future impact of congestion on fuel demand is uncertain. Increased congestion will tend to reduce travel but also the effective fuel economy due to more stop-and-go driving. Addressing another concern of the Coalition, higher fuel economy cases have been included in the analysis.

Todd Campbell of the Coalition asked that we pay more attention to the 2050 issues in Paul Wuebben's presentation. He asked that the report recommend a reduction in petroleum demand of at least 10 percent below 2000 levels.

Staff Response: Several different fuel economy scenarios are being evaluated, including changes in national fuel economy cases based on work by the National Academy of Sciences and the American Council for an Energy Efficient Economy (ACEEE). The results of this work will be presented at the February 26 Staff

workshop. These cases will include more aggressive improvements in vehicle fuel economy, potentially reducing petroleum demand below 2000 levels.

Waste Management Inc.: Frank Mazanec questioned the increase in diesel demand, given the shift to natural gas use in transit buses, trash trucks and other heavy-duty vehicle fleets. WMI is proposing to convert over 200 trash trucks to Liquefied Natural Gas. WMI also commented that we should examine the potential for coal liquefaction as a strategy, because of its significant U. S. production potential.

Staff Response: The "base case" forecast accounts for an increased use of natural gas by transit buses and trash trucks. With some 400,000 diesel-fueled trucks, we do not anticipate significant impact on future diesel demand through 2030 for the base case due to increased transit and truck use of natural gas. Coal liquefaction is among the options that may compete in the future with conventional crude oil to provide transportation fuels.

Rick McCann: This individual requested documentation for the CALCARS model, and posed a number of specific questions regarding model inputs, such as vehicle speeds, difference in vehicle costs due to turnover, any price elasticity inputs built into the model.

Staff Response: Information on CALCARS model is available at the Commission's web site (Publication # 300-96-003).

In a later comment, Mr. McCann asked what the "break even" point was for all of the strategies (based on costs and benefits). He asked us to consider setting the net benefits at zero in our analysis of pricing strategies.

Staff Response: A break even point of cost /benefit analysis identifies a strategy level which changes petroleum use while causing zero change in the net cost/benefits from the base case forecast.

Another approach would be to recommend the level of a strategy, which while perhaps not maximizing the reduction of petroleum demand, would result in achieving the least cost option or at least reducing the overall cost of transportation in California. With the broad nature of the present analysis, the staff generally will not be able to identify these specific levels within the resources and time constraints.

Air Resources Board: Alan Lloyd, ARB's Chairman, attended the morning session and asked what level of hybrid vehicles was being assumed in our forecast. He also asked what level of hybrids would be needed to achieve "substantial" petroleum reduction.

Staff Response: Different levels of hybrid penetration and petroleum demand reduction are represented in the various fuel economy improvement cases included in the analysis.

Neil Koehler: Neil represents the ethanol industry, and is concerned with how ethanol is being treated in the "base case" forecast. Leigh Stamets responded that we have assumed that roughly six percent is displacing gasoline, as ethanol is blended into the fuel. Neil would like our report to be clear on how ethanol is treated in the report. He would also like us to evaluate a 10 percent ethanol penetration case.

Staff Response: We are in the process of evaluating a number of additional ethanol strategies, including a 10 percent ethanol blend, a "maximum achievable" penetration of E-85 vehicles, ethanol as a fuel cell fuel, and ethanol as a fuel for heavy-duty vehicles.

PG&E: Jim Larson of PG&E expressed concern that we are underestimating natural gas use in the future. He stressed growing market niches for natural gas in transit, trucks, trash and school bus applications.

Staff Response: Future natural gas demand is included in the base case and strategies for transit, trucks and school bus applications. Staff welcomes additional information on potential programs to increase natural gas penetration.

Natural Resources Defense Council: Roland Hwang of NRDC commented that in a recent report, the Natural Resources Defense Council states that a 58 percent petroleum displacement is possible through a combination of vehicle fuel economy, "smart growth" measures, and new fuels. He mentioned that if Iraq were to cut oil production, and refinery capacity were reduced, short-term price volatility would double the price of oil. He asked that we characterize our analysis of price volatility more clearly, and that we examine "high" oil price scenarios in our work..

Staff Response: Although the viability of a combination of aggressive measure to displace petroleum is uncertain, staff analysis also shows petroleum displacement

of 58 percent or more from forecast levels is possible. In an analysis of price volatility, we have identified the monthly standard deviation in prices for recent years. Our long-term high fuel price case reflects the staff's best estimate of long term prices including some voluntary or involuntary constraints on production.

Union of Concerned Scientists: Patricia Monahan of UCS questioned the basis for consumer outreach programs, and asked if there were based on any empirical evidence. She also questioned the negative net present value results of Chris Kavalec's analysis of fee-bates. In a follow-up phone call, she asked if we could examine a national feebate system, use ranges instead of single points in determining costs and benefits, and urged us to include automobile manufacturer response in our analysis.

UCS further urged us to go beyond the conservation estimates of CAFÉ increases possible in the National Academy of Sciences Study. She would like to see a "40 mile per gallon" CAFÉ standard across the board, for both passenger cars and light trucks. Others, including Russell Long of the Blue Water Network, urged the Commission to examine more aggressive vehicle fuel economy cases.

Staff Response: We are conducting a pilot program to better understand the impacts of government incentives and consumer outreach programs on consumer selection of higher fuel economy vehicles. Our expanded analysis of feebate programs includes the effect of manufacturer response. As noted above, the analysis will also include cases with higher levels of fuel economy.